

What Will PennDOT's "Sign Inventory Management & Ordering System" (SIMOS) Do?



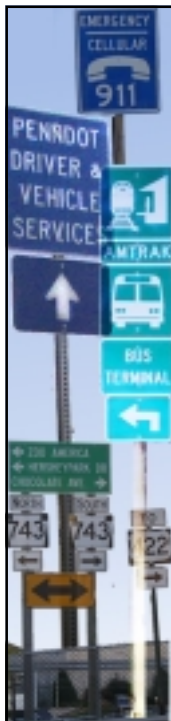
Presented by:
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Minhua Wang

April 9, 2001



Background

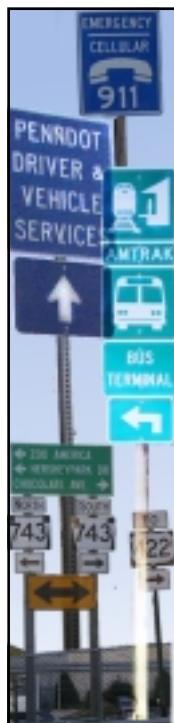
- Sign Tort Liability Is High - Est. \$ 1.7 M /Year
- Eleven Unique Sign Management Systems
- No Statewide Inventory of Signs
- No Correlation Between Sign Shop Production and Field Needs
- Budgeting Based on Historical Expenditures - Not Needs
- Field Information Is Collected on Paper Maps and Reports





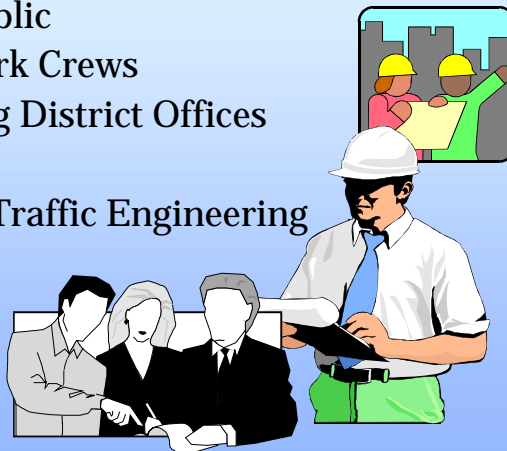
SIMOS Goals

- Completely automate the process of collecting field data, processing work orders, ordering signs, and maintaining inventory
- Develop a comprehensive, centralized database
- Provide interface with other available databases at PennDOT
- Enhance PennDOT's ability to improve signage on a statewide basis, reducing tort liability



SIMOS Stakeholders

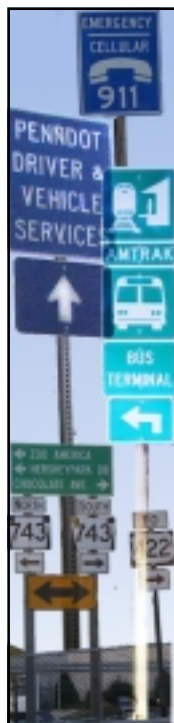
- General Public
- County Work Crews
- Engineering District Offices
- Sign Shop
- Bureau of Traffic Engineering





SIMOS Benefits

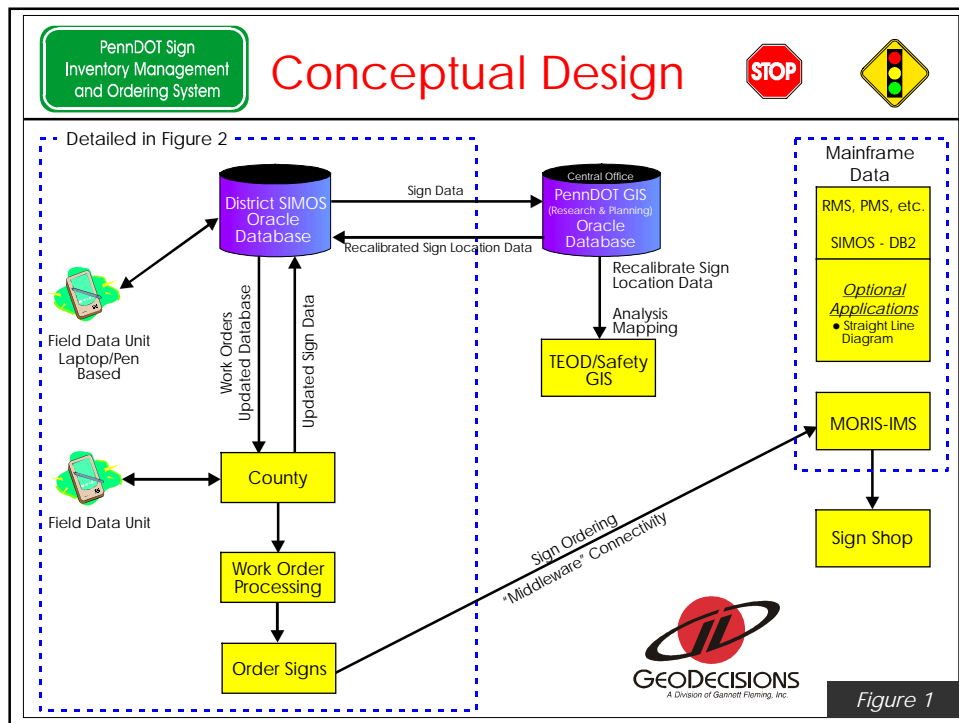
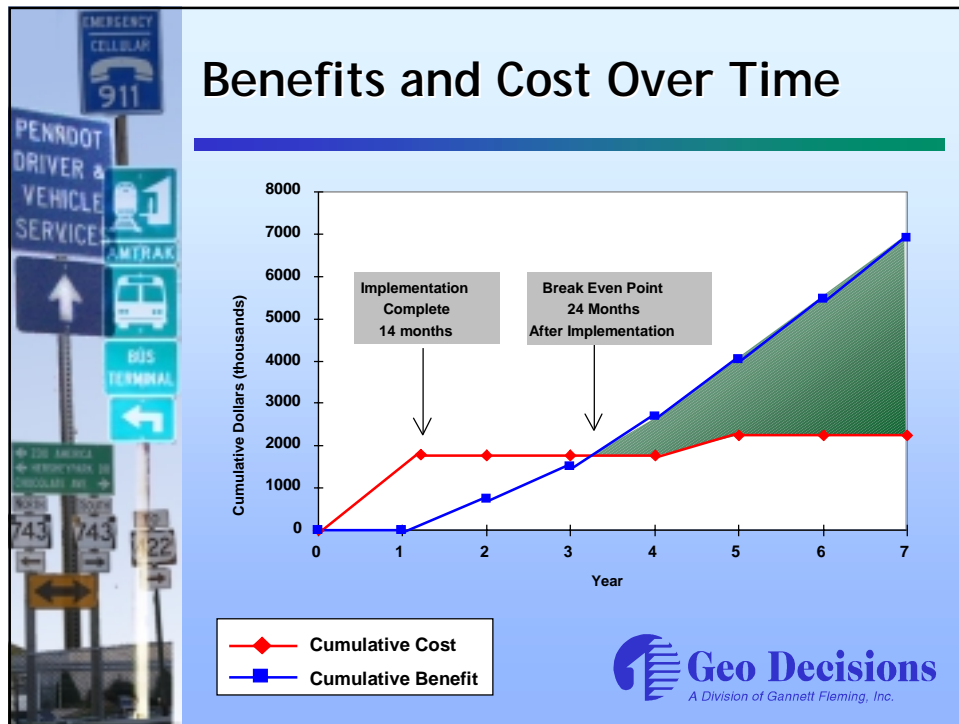
- Better Decision Making for Capital Budgeting
- Increase Operational Efficiency
- Lower Operation Costs
- Reduce Sign Order Errors
- Reduce Inventory of Signs
- Reduce Tort Liability
- Improve Sign Review Cycle Time



SIMOS Benefits

- General Public will Benefit
 - ◆ Better Signage/Safety
 - ◆ Most Effective Use of Tax Dollars

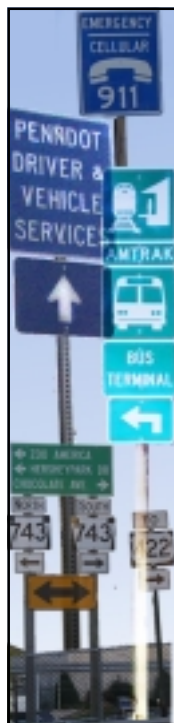






SIMOS System Development

- Operating System: Windows NT/Win95/Win98
- Development Environment: Visual Basic
- GIS Engine: GeoMedia Objects
- Customized User-Friendly Graphic User Interface
- Why GeoMedia?
 - ◆ PennDot GIS Standard
 - ◆ Compatibility with Existing PennDOT Database



SIMOS System Components

- Field Data Collection Module
- Data Communication Modules
 - ◆ Field Data Unit to County Server
 - ◆ County Server to District Server
 - ◆ District Server to Central Office Server
- Work Order Generation Module
- Sign Order Generation Module
- Sign Location Recalibration Module
- Data Conversion Module



County SIMOS

Field Data Unit



- Contain Countywide Sign Data
- GIS-Based
- Easy-to-Use Graphical User Interface

County SIMOS

Field Data Unit

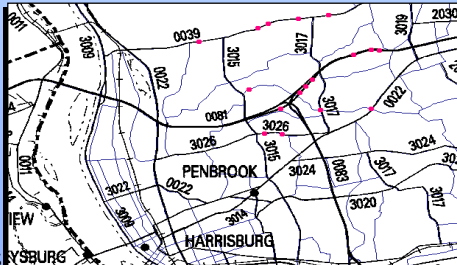


- Collect Sign Inventory Data
- Identify Maintenance Activities (Action Items)
- Display Sign in “PennDOT Roads” Type Map

County SIMOS

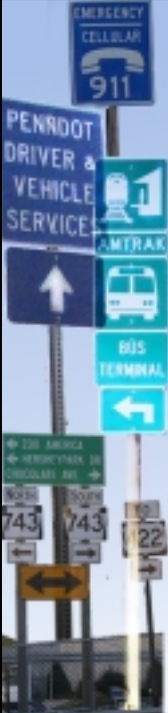



Field Data Unit

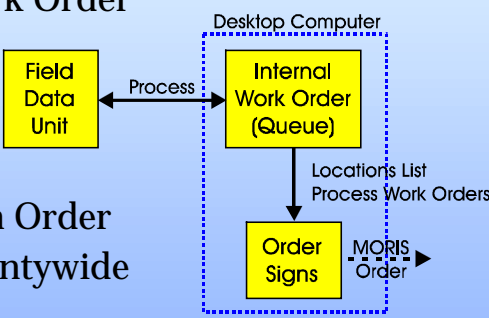


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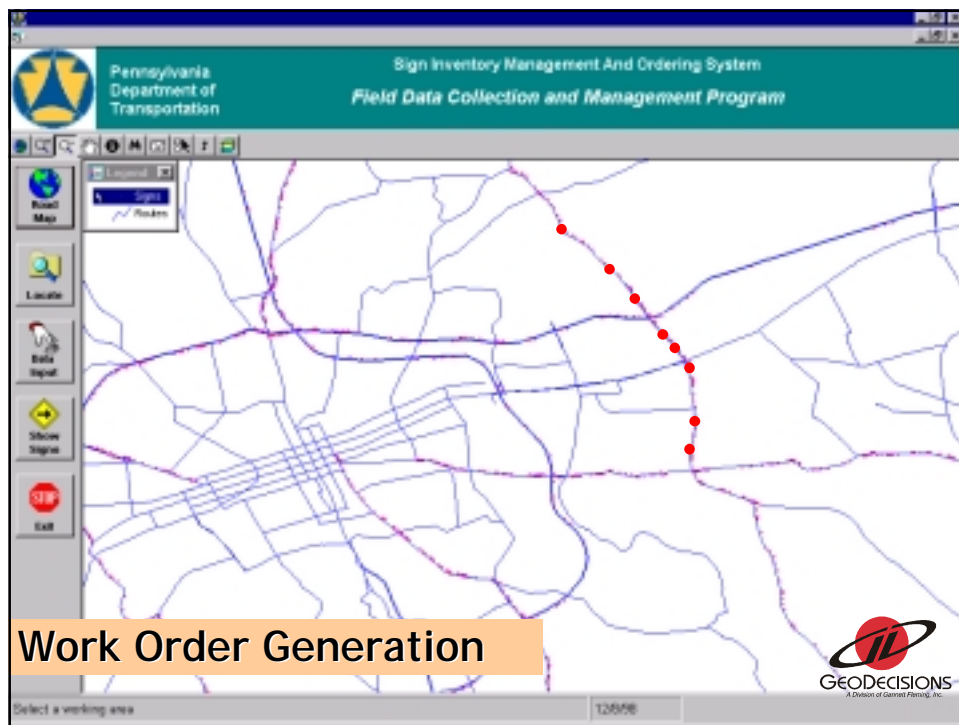
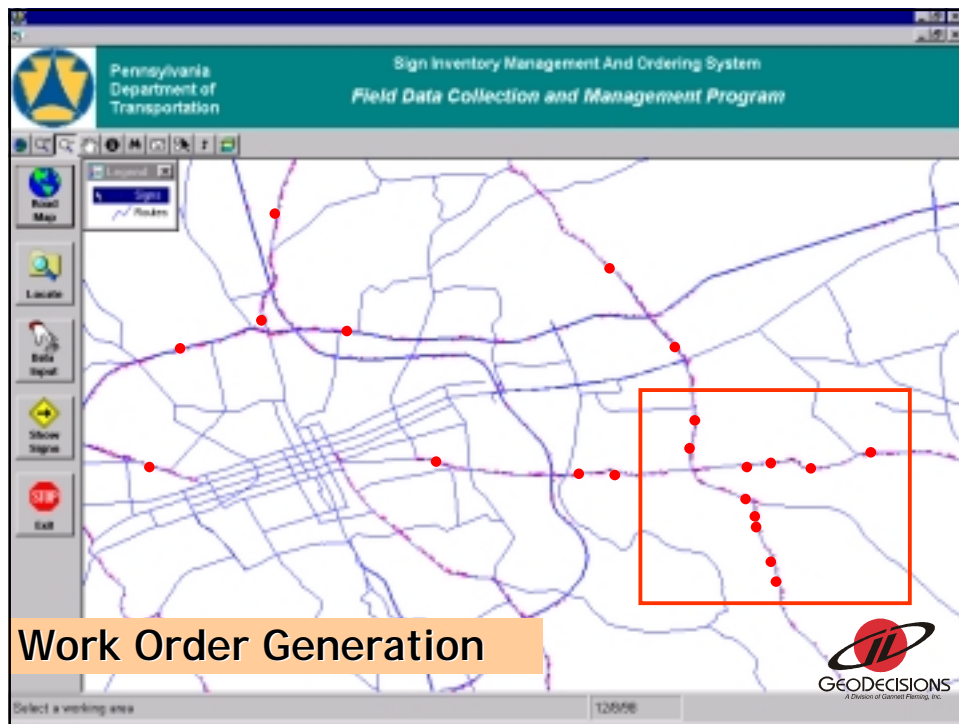




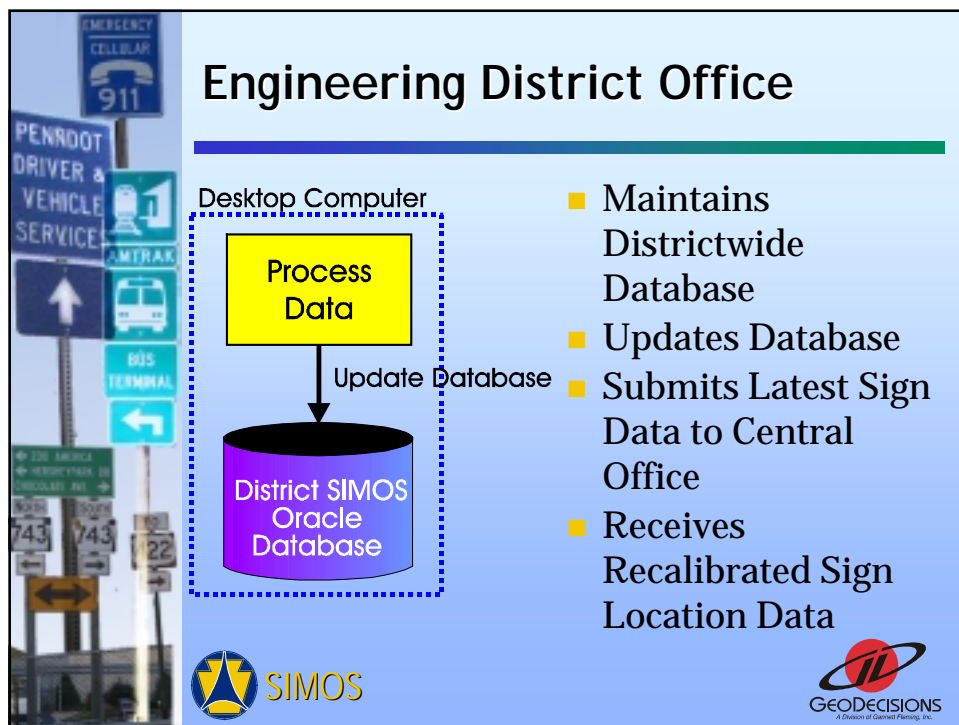
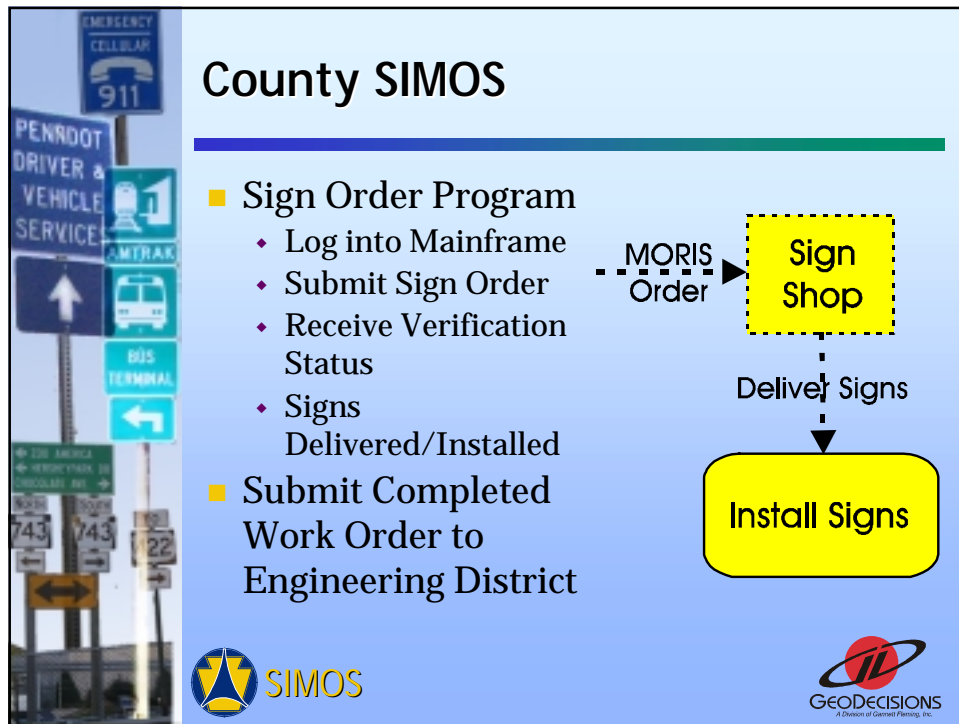
County SIMOS

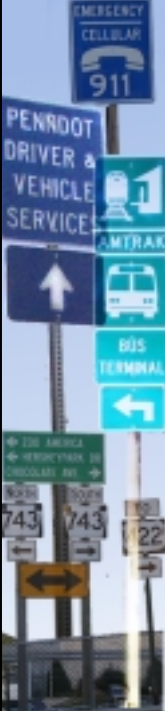


- Maintain Pending Work (Queue)
- Generate Work Order
 - ◆ Date
 - ◆ Route
 - ◆ Location
 - ◆ Type
- Generate Sign Order
- Maintain Countywide Database

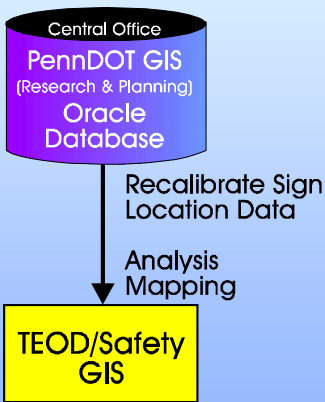






Central Office - Bureau of Planning & Research

- Maintain Statewide Roads File
- Store Statewide Sign Data
- Recalibrate Sign Location Data
- Applications
 - ◆ Analysis
 - ◆ Mapping



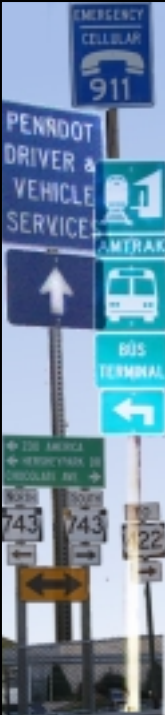


Central Office
PennDOT GIS
(Research & Planning)
Oracle Database

Recalibrate Sign Location Data

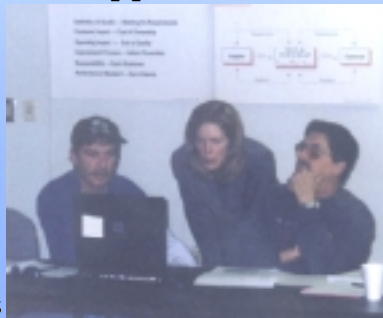


Analysis Mapping

TEOD/Safety GIS

Training

- Three-Day Initial Training at District/Central Office
- One-Day Follow-Up Training at Each County
- Phone Support/On-Site Support as Required

Project Status

- Project Completion - Winter 2000-01
 - ◆ Field Data Unit
 - ◆ Completed All Modules
 - ◆ PILOT Project (District 8 and Two Counties)
- Implemented & Trained 3 Districts and (16) Counties
- Remaining Districts (8) and Counties (51) by June 15, 2001

SIMOS Demo